

REMARKS

I. Status of the claims

Claims 1-5 and 7-27 are pending in this application. Applicant affirms the election of claims 1-15, made without traverse on July 3, 2002, and acknowledges that claims 16-27 are withdrawn from further consideration by the Examiner.

Without prejudice or disclaimer, claim 1 has been amended and claim 6 has been cancelled, in order to more particularly point out and distinctly define the claimed invention. Specifically, claim 1 has been amended to incorporate the limitation of claim 6. Support for this amendment can be found throughout the claims and specification as originally filed, e.g., the instant specification at page 10, line 25-page 11, line 2, page 14, line 17-page 15, line 22, Examples 1-3, and original claims 6 and 26. Thus, no new matter has been added.

II. Rejection under 35 U.S.C. § 112, first paragraph

The Office has rejected claims 1-15 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time the application was filed, had possession of the claimed invention, i.e., lack of written description support for the claimed subject matter in the specification. Specifically, the Examiner alleges that the "limitations 'wherein said mixture of ingredients does not include carbodiimide catalyst[s] containing phospholene oxide and heterocyclic nitrogen containing polyols containing at least two beta-hydroxy terminated carbamate groups' are nowhere supported in the Applicant's specification." Final Office Action at page 2,

paragraph 3. Applicant respectfully disagrees and traverses this rejection for at least the following reasons.

Applicant respectfully reminds the Examiner that in rejecting a claim under the first paragraph of 35 U.S.C. § 112 for lack of adequate descriptive support, *the burden is on the Examiner* to establish that the originally-filed disclosure would not have reasonably conveyed to one having ordinary skill in the art that an Applicant had possession of the now claimed subject matter. See *Ex parte Parks*, 30 U.S.P.Q.2d 1234, 1236 (Bd. Pat. App. & Int. 1993), citing *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 U.S.P.Q.2d 1767 (Fed. Cir. 1993). Moreover, proper written description support does not require the language of the claim to be set forth "*in haec verba*" in the specification. *In re Wright*, 866 F.2d 422, 425 (Fed. Cir. 1989). Rather, it is sufficient if the originally-filed disclosure would have conveyed to one having ordinary skill in the art that the inventor had possession of the concept of what is claimed. See *Ex parte Parks*, 30 U.S.P.Q.2d at 1236 (Bd. Pat. App. & Int. 1993), citing *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 U.S.P.Q.2d 1767 (Fed. Cir. 1993), citing *In re Anderson*, 471 F.2d 1237, 176 U.S.P.Q. 331 (C.C.P.A. 1973).

Contrary to the Examiner's allegations, the instant claim limitations are fully supported by the instant specification. In particular, support for the limitations can be found in the instant specification at page 14, line 17 - page 15, line 22, which refers to the preferred catalysts of the claimed invention. Further, at page 15, lines 9-22, of the instant specification, the preferred list of tertiary amine trimerization catalysts *excludes* carbodiimide catalysts containing phospholene oxide. In addition, at page 6, line 5- page 7, line 25 of the instant specification, the polyols listed as suitable for the claimed

invention do not specifically include polyols containing at least two beta-hydroxy terminated carbamate groups. See *also* Examples 1-3, at pages 24-30 of the instant specification, which describe three versions of the "invention" where the excluded catalysts and polyols are, in fact, excluded. Thus, consistently throughout the disclosure, including the several relevant examples, the excluded catalysts and polyols are never used.

As noted above, it is the Examiner's burden to show how the instant specification does not reasonably convey to one having ordinary skill in the art that Applicant had possession of the presently claimed subject matter. The Examiner has failed to meet this burden. The Office has not offered any such explanation, only a conclusory statement, which is improper as a matter of current U.S. patent practice. Applicant respectfully submits that the Examiner can only offer a conclusory sentence because, as in *Ex Parte Parks*, "it cannot be said that the originally filed disclosure would not have conveyed to one having ordinary skill in the art that [the inventors] had possession of the concept" of the claimed foam in the absence of the excluded catalysts and polyols. *Ex parte Parks*, 30 U.S.P.Q.2d at 1237.

The law does not require that the instant specification *expressly* exclude specific types of catalysts or polyols. The Federal Circuit has held that Applicants may exclude certain components in the claims that are taught by the prior art. *In re Johnson*, 194 U.S.P.Q. 187, 196 (C.C.P.A. 1977). In the present case, the examples in the instant specification fully support the limited genus of the amended claims. See Examples 1-3, at pages 24-30 of the instant specification, which demonstrate the claimed invention.

Thus, for each of these reasons, Applicant respectfully submits that the rejection under 35 U.S.C. § 112, first paragraph is improper and should be withdrawn.

III. Rejection under 35 U.S.C. § 102(b)/103(a)

The Office has rejected under § 102(b), as anticipated by or, in the alternative, under 103(a), claims 1-4 and 11-15 over EP 716107 ("EP '107") and claims 1-4 over U.S. Patent No. 4,300,580 to Porosoff et al. ("Porosoff"). Applicant respectfully traverses these rejections as moot.

As initial matter, the present amendment has incorporated the limitation of claim 6 into claim 1, and thus into all claims dependent from claim 1. As claim 6 was not previously rejected under 35 U.S.C. § 102(b)/103(a), the rejection of claims 1-5 and 11-15 are now moot. For at least the following reasons, Applicant respectfully submits that the rejection be withdrawn.

IV. Rejection under 35 U.S.C. § 103(a)

The Office has rejected under § 103(a), claims 5 and 7-10 over EP '107 or Porosoff, claim 6 over EP '107 or Porosoff in view of U.S. Patent No. 4,328,322 to Baron ("Baron"), and claim 6 over EP '107 or Porosoff in view of U.S. Patent No. 6,020,392 to Kushner et al. ("Kushner"). Applicant respectfully traverses these rejections as moot.

As discussed above, the present amendment has incorporated the limitation of claim 6 into claim 1, and thus into all claims dependent from claim 1. Thus, the rejection of claims 5 and 7-10 over EP '107 or Porosoff are now moot. For at least the following reasons, Applicant respectfully submits that the rejection be withdrawn.

Moreover, both EP' 107 and Porosoff, do not support a rejection based on obviousness, since neither reference teaches or suggests all of the elements of the instant claims.

Further, even by combining EP '107 and Porosoff, in the absence of any motivation to do so, there is no evidence in the record that one of ordinary skill in the art would arrive at a foam with the desired properties of the claimed invention, which does not include the carbodiimide catalysts containing phospholene oxide disclosed by EP '107, or the heterocyclic nitrogen containing polyols containing at least two beta-hydroxy terminated carbamate groups disclosed by Porosoff. *See In re Zurko*, 258 F.3d 1379, 1386, 59 U.S.P.Q.2d 1693, 1697 (Fed. Cir. 2001) (finding that unless "substantial evidence" found in the record supports the factual determinations central to the issue of patentability, the rejection is improper and should be withdrawn). Finally, the removal of these ingredients would render both of the references inoperable for their intended purpose. Thus, the rejection is improper for this additional reason.

Applicant respectfully submits that Baron does not cure the deficiencies of EP '107 or Porosoff. Specifically, Baron relates to the production of polymeric products such as polyurethane elastomers by the diisocyanate polyaddition process. See col. 1, lines 11-21. Baron aims at providing a system for the production, by a simple isocyanate polyaddition process, of synthetic polymers exhibiting certain physical properties. See col. 2, lines 20-24.

According to Baron, the invention is achieved by reacting a polyisocyanate with substantially an equivalent amount of an oligomeric para-, meta- or di-meta-aminobenzoic acid ester or amide having the formula given at line 35 of col. 2.

Although Baron declares that the synthetic polymers prepared may include polymeric foams (see col. 19, lines 23-27), Applicant points out that it notably fails to teach or suggest:

1) that the foam has been obtained by using non-organic foaming agents and, in particular, water-based foaming agents, which were known to trigger instability and adhesion problems; and

2) that the foam is a rigid polyurethane foam consisting of closed cells substantially free therein of optionally halogenated hydrocarbon foaming agents.

Additionally and although Baron discloses, among the great multitude of para-, meta- or di-meta-aminobenzoic acid ester or amide, the polyamine defined by instant claim 6, Applicant also points out that:

1) such a polyamine is taught as a reagent that should react with the polyisocyanate in substantially an equivalent amount, i.e., a reagent which replaces the polyester polyol having a minimum functionality equal to 2 and a hydroxyl number of from 250 to 600 as recited in instant claim 1, while the amount of polyamine recited in instant claim 1 (as amended) is well below such a substantially equivalent amount; and

2) Baron does not teach or suggest that any advantages may be achieved by employing such a polyamine as an additional reactant in proportions well below the "substantially equivalent amount," with the polyisocyanate to obtain the claimed rigid polyurethane foam obtained by using non-organic foaming agents, and comprising a foamed structure consisting of closed cells substantially free therein of optionally halogenated hydrocarbon foaming agents.

Thus, it is evident that the "motivation to improve the mechanical strength of the foam," as alleged by the Office, amounts to an improper hindsight analysis of Baron, taking into account that neither the working examples, nor the other parts of the description, support such a conclusion with regard to a foam. See *Zurko*, 258 F.3d at 1385, see also *In re Dembiczak* 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999) ("Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references"). Specifically, all of the examples of Baron relate to cast, i.e., solid non-cellular, elastomeric products, and do not support any conclusion with regard to the properties that the claimed rigid polyurethane foam should possess: good heat insulating properties, good adhesion characteristics to the supporting substrate(s) which constitute the building element to be manufactured and also good mechanical characteristics, i.e., low friability. Accordingly, the rejection is improper and should be withdrawn for this reason.

Applicant also respectfully submits that Baron does not cure the deficiencies of EP '107 or Kushner. Specifically, Kushner relates to the production of polyurea (PUR) microcellular elastomeric foam using the one-shot method (col. 1, lines 5-7). According to Kushner, this object is achieved by reacting a polyisocyanate with a polyol derivative selected from the group of di(aminobenzoate) ester of an oligomeric polyol, i.e. an oligomeric diamine, in the presence of a blowing agent. See col. 2, lines 34-43. The utilization of such a reaction mixture allegedly allows to achieve a number of advantages none of which, however, is one of the properties required by the rigid foam

of the present invention, i.e., good heat insulating properties, good adhesion characteristics to the supporting substrate(s) which constitute the building element to be manufactured and low friability. See col. 2, lines 60-67; col. 3, lines 1-11.

Additionally, although Kushner discloses, among the great multitude of oligomeric diamines, the polyamine defined by instant claim 6, Applicant respectfully points out that:

1) such an oligomeric diamine is taught to be a reagent which should react with the polyisocyanate in at an equivalent ratio of 0.85 to 1 (col. 5, lines 33-34), i.e. is a reagent which replaces the polyester polyol having a minimum functionality equal to 2 and a hydroxyl number of from 250 to 600 recited in present claim 1, while the amount of polyamine recited in instant claim 1 (as amended) is well below such an equivalent ratio;

2) Kushner does not teach or suggest that any advantages may be achieved by employing such an oligomeric diamine, as an additional reactant in proportions well below the aforementioned equivalent ratio with the polyisocyanate, to obtain the claimed rigid polyurethane foam; and

3) Kushner teaches not to use polyisocyanate/polyester polyols systems, i.e., the systems of the present invention, which are said to be disadvantageous. See col. 1, lines 51-67 and col. 2, lines 1-6.

Thus, other than using Applicant's disclosure as a template, the Examiner cannot show that "motivation to improve the mechanical strength of the foam," is present in the prior art. Applicant respectfully reminds the Examiner that the Federal Circuit has concluded that such hindsight analysis is improper. See *Zurko*, 258 F.3d at 1385. In

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the present case, the Federal Circuit's position is particularly relevant, considering that Kushner neither in the working examples, nor the other parts of the description, supports a conclusion with regard to a rigid polyurethane foam obtained with a polyisocyanate/polyester polyols reaction system. Accordingly, the rejection is improper and should be withdrawn for at least the reasons stated above.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully requests the reconsideration and reexamination of this application and the timely allowance of the pending claims. The Examiner is invited to contact Deborah Sharfman at (202) 408-4368, if any matter may be resolved by a telephone conference.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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